

REMARKS

The specification is amended at page 1 to make specific reference to prior applications.

Claims 1, 3, 4, and 24-35 are canceled. Claims 2 and 5-23 are amended. Claims 36-42 are added. By this amendment, claims 2, 5-23 and 36-42 are pending in the instant application.

Claim 1 is replaced by new claim 36, which is drawn to a composition comprising a higher percentage of high molecular weight polysaccharides and polysaccharide complexes from *Chlorella* than a crude extract. There is support for claim 36, as follows:

- The specification teaches the preparation of *Chlorella* extracts containing high molecular weight polysaccharides and polysaccharide complexes (page 5, lines 14-16)
- The specification describes high molecular weight polysaccharides and polysaccharide complexes having molecular weights of about  $3 \times 10^5$  Da to about  $1 \times 10^7$  Da (page 5, lines 23-31 and page 14, lines 7-15). Basis for this amendment is found also in the Examples, which show separation of the extract based on size and that the various peaks containing high molecular weight polysaccharide and polysaccharide complexes, including those about  $3 \times 10^5$  Da to about  $1 \times 10^7$  Da, are active.
- The specification states that the *Chlorella* compositions of the invention are enriched in high molecular weight polysaccharides and polysaccharide complexes compared to the crude extract (page 17, line 30 to page 18, line 2).
- The specification teaches, especially in the examples, various size fractionation procedures so that the fractions containing the high molecular weight polysaccharides and polysaccharide complexes are obtained.
- The crude extract is defined by the process of making it, as described at page 12, lines 17-26.

Claims 2 and 5-23 are amended to depend on claim 36.

New claims 37-42 depend on claim 36. Support for the size ranges recited in these claims is found at page 5, lines 21-31.

The claim limitation in claim 42, --wherein the extract is substantially free of *Chlorella* polysaccharide and polysaccharide complexes of less than about  $1 \times 10^5$  Da--, finds basis at least at page 13, lines 27 to 30, page 16, line 23 to page 17, line 1, and page 17, lines 21 to 24. Page 13 describes fractions "with average molecular weight of the immunomodulatory fraction of interest ranging from 100 up to 10,000 KDa". The exemplified fractions therefore exclude polysaccharides and polysaccharide complexes of less than  $1 \times 10^5$  Da. Page 16 describes size fractionation of IBP-4 where only fractions

representing the first peak, i.e. of a size range greater than 100 KDa, were isolated as IBP-5. Size fractionation of IBP-4 clearly excludes complexes less than  $1 \times 10^5$  Da. Page 17 describes use of Sephadex G 100 to remove from the fraction IBP-2 the majority of lower molecular weight material. Sephadex G 100 is typically used to remove material less than  $1 \times 10^5$  Da. Example 4 (page 26), and Example 6 (page 27) describes dialysis and ultrafiltration to remove lower molecular weight material and states that "only a small portion of immunoactivity was associated with low molecular mass (less than 100 KDa) compounds".

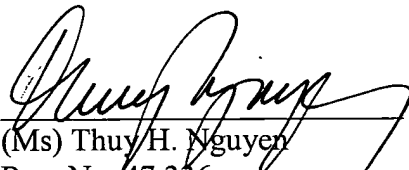
Because these amendments do not introduce new matter, entry thereof by the Examiner is respectfully requested.

Should the Examiner have any questions or comments regarding the pending application or this Amendment, the Examiner is requested to telephone the undersigned at 613-232-2486.

If there are any fees due in connection with the filing of this Amendment, please charge the fees to our Deposit Account Number 19-2550. If a fee is required for an extension of time under 37 C.F.R. §1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

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